PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : C12Q 1/68

A1

(11) International Publication Number: WO 00/43538

(43) International Publication Date: 27 July 2000 (27.07.00)

(21) International Application Number: PCT/CA00/00047

(22) International Filing Date: 19 January 2000 (19.01.00)

(30) Priority Data:
2,259,745 19 January 1999 (19.01.99) CA

(71) Applicant *(for all designated States except US)*: UNIVERSITE DE MONTREAL [CA/CA]; Postal Code 6128, Station A, Montreal, Quebec H3C 3J7 (CA).

(72) Inventors; and
(75) Inventors/Applicants *(for US only)*: PAQUIN, Bruno [CA/CA]; 289 Randill, Châteauguay, Quebec J6J 2P4 (CA). BRUKNER, Ivan [CA/CA]; 1882 Sherbrooke East #2, Montreal, Quebec H2K 1B5 (CA). TREMBLAY, Guy [CA/CA]; 3341 Maréchal #4, Montreal, Quebec H3T 1M8 (CA).

(74) Agents: DUBUC, Jean, H. et al.; Goudreau Gage Dubuc & Martineau Walker, The Stock Exchange Tower, Suite 3400, 800 Place Victoria, P.O. Box 242, Montreal, Quebec H4Z 1E9 (CA).

(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published
With international search report.
Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: PROCESS FOR THE GENERATION OF OLIGONUCLEOTIDE LIBRARIES (OLs) REPRESENTATIVE OF GENOMES OR EXPRESSED mRNAs (cDNAs) AND USES THEREOF

(57) Abstract

A process for the generation of oligonucleotide libraries representative of a given template is described. Starting from a random pool of oligonucleotides, the process selects only those which hybridize to the template nucleic acid. This selection yields a highly specific library that represents an oligo–image of the chosen template. The novel quality of this approach is the generation of amplifiable oligonucleotide probes that are of uniform length, free of repetitive sequence motifs and easily subjected to differential selection. This technique is used to produce different oligonucleotide libraries (OLs) and shows that these OLs do not cross–hybridize. Differential selection of these OLs produces oligonucleotides that can be used in the identification, characterization and isolation of nucleic acids.